BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules Concerning Maritime Communications	)	PR Docket No. 92-257

To: The Commission

COMMENTS OF PinOak Digital Corporation

PinOak Digital Corporation, by its counsel and pursuant to Section 1.415 of the Commission's Rules, submits these comments in the above-captioned proceeding.

Interest of PinOak Digital Corporation

PinOak Digital Corporation is the pioneering leader in High Speed, High Frequency, Low Cost Digital ("H^2Digital") communications at sea. Its affiliate, PinOak Communications, Inc., is the licensee of a developmental private coast station, WHW462. This license comprises a family of 22 frequencies in the hf range, over which the feasibility of high speed, digital file transfers to and from ships at sea is being explored and demonstrated daily.

One important aspect of the present rule making proceeding is the proposal to introduce greater flexibility in the use of narrow-band direct printing techniques. This is the area that has been under development by PinOak for a number of years. PinOak's involvement, experience and expertise in this area are well known to the Commission, having been extensively documented in its application for its developmental license and in its other filings.

PinOak gave a presentation on its technology at the 1994 meeting of the Radio Technical Commission for Maritime Services (RTCM) in San Antonio, Texas, which was very well-received. Most recently, PinOak's technology and service was discussed extensively in *Cruising World* magazine[1/] as well as in numerous articles in various other well known marine publications.

PinOak filed comprehensive comments in the inquiry phase of this proceeding and is pleased to offer its views now in the rule making phase.

1/ "How to Access the Latest Weather Information," by renowned ocean racing sailor, Bill Biewenga, in the September, 1995 issue.

COMMENTS

PinOak Supports the Use of the ASCII Character Set And Modern Communications Protocols

Noting that the narrow-band direct printing (NB-DP) mode of data communications in the hf band is limited to a data modulation rate of 100 baud, inefficient error correction protocols, and the limited Baudot character set, the Commission has proposed to permit the Maritime Mobile Service to take advantage of modern, advanced communications modes that have evolved since the inception of NB-DP.

Specifically, the Commission proposes to revise Section 80.219 of its rules to permit NB-DP using any data communications protocol, character set, data rate and data word length, so long as they meet current emissions requirements.

PinOak praises this proposal to advance technology and strongly endorses it. In the last five years there have been significant developments that now make possible the effective use of high frequencies for reliable, long distance, data communications. These developments include hf modems that employ sophisticated digital signal processors; error-correcting communications protocols; and data compression algorithms. The new high frequency coding transmission techniques can create "code gain," a term which expresses

the ability to send much more data without increasing radiated power.

The result is a newfound ability to send and receive computer files by radio over very long distances, at very high transfer speeds and with complete accuracy. Permitting the use of the full ASCII character set gives vessels at sea the ability to send and receive all types of computer files, including text and graphics. This opens up the reality of transferring detailed weather maps, charts, diagrams, first aid instructions and the like, just as on land.

Permitting the use of various communications protocols, data rates and data word lengths would permit the Maritime Mobile Service to take advantage of today's vastly improved digital communications techniques that offer high transmission speed and accurate error correction. It also would permit the Service to take advantage of new developments as they occur without regard to any specific proprietary technology.

Under its developmental authorization, PinOak is demonstrating on a daily basis the wisdom of the Commission's proposal. Market response to our system indicates that there is an unmet demand for a means of sending and receiving computer files at high speed and low cost, especially

among smaller vessels, that is, vessels under 1600 gross tons displacement.

Typically, these vessels cannot afford to install satellite ship earth stations nor can they afford the high recurring costs of satellite transmissions that stem from transponder usage charges. They can, however, afford to add an hf modem to the computer and marine radio that is generally already aboard. Due to the nature of hf transmissions, the communications cost is low and affordable for smaller vessels.

Conclusion

The capability of smaller vessels to send and receive affordably computer files of all types, including text, charts, graphics and weather maps is now technically feasible. Only outmoded regulations now stand in the way of

further development. The Commission is absolutely right in proposing to clear away these regulatory impediments.

Respectfully submitted,

PinOak Digital Corporation

By 
Raymond A. Kowalski
Its Counsel

Keller and Heckman
1001 G Street, N.W., Suite 500 West
Washington, D.C. 20001
(202)434-4100

September 22, 1995